



TECHNICAL MANUAL

INVERTER RESIDENTIAL AIR CONDITIONERS (Split system, air to air heat pump type)

Wall mounted type

SRK20ZJJ-S

25ZJJ-S

35ZJJ-S

50ZJJ-S

Floor standing type

SRF25ZJX-S

35ZJX-S

50ZJX-S

Ceiling concealed type

SRR25ZJJ-S

35ZJJ-S

SRK20ZJX-S

25ZJX-S

35ZJX-S

50ZJX-S

60ZJX-S

Ceiling cassette-4way compact type

FDTC25VD

35VD



MITSUBISHI HEAVY INDUSTRIES, LTD.

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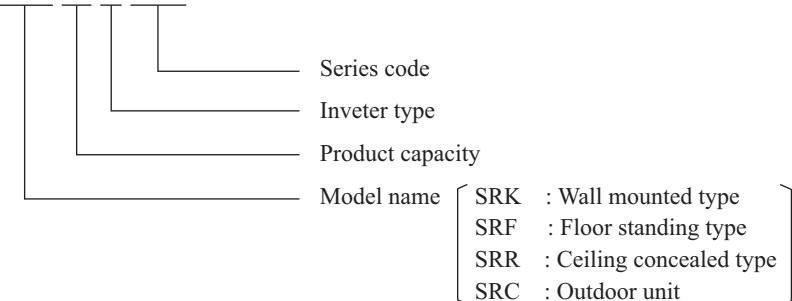
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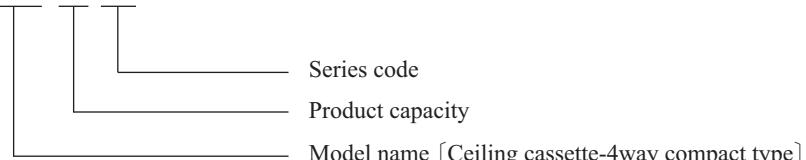
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■How to read the model name

Example: SRK 20 Z JX-S



Example: FDTC 25 VD



12. OPTION PARTS

12.1 Instullation of wired remote controller (RC-E4)

PJA012D729A A

Read together with indoor unit's installation manual.

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connection or hold will cause abnormal heat generation or fire. !
- Make sure the power supply is turned off when electric wiring work.
Otherwise, electric shock, malfunction and improper running may occur. !

⚠ CAUTION

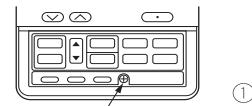
- DO NOT install the remote controller at the following places in order to avoid malfunction.

(1) Places exposed to direct sunlight	(4) Hot surface or cold surface enough to generate condensation
(2) Places near heat devices	(5) Places exposed to oil mist or steam directly
(3) High humidity places	(6) Uneven surface
- DO NOT leave the remote controller without the upper case.
In case the upper case needs to be detached, protect the remote controller with a packaging box or bag in order to keep it away from water and dust. !

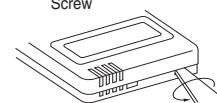
Accessories	Remote controller, wood screw (ø3.5×16) 2 pieces
Prepare on site	Remote controller cord (2 cores) the insulated thickness in 1mm or more. [In case of embedding cord] Electrical box, M4 screw (2 pieces) [In case of exposing cord] Cord clamp (if needed)

Installation procedure

- ① Open the cover of remote controller , and remove the screw under the buttons without fail.

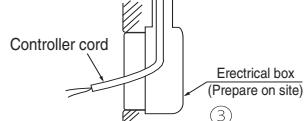


- ② Remove the upper case of remote controller.
Insert a flat-blade screwdriver into the dented part of the upper part of the remote controller, and wrench slightly.

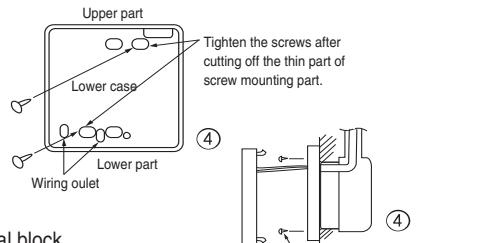
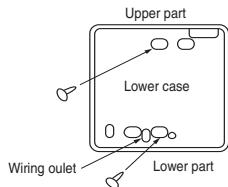


[In case of embedding cord]

- ③ Embed the electrical box and remote controller cord beforehand.



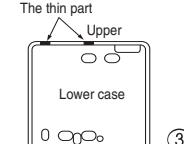
- ④ Prepare two M4 screws (recommended length is 12-16mm) on site, and install the lower case to electrical box. Choose either of the following two positions in fixing it with screws.



- ⑤ Connect the remote controller cord to the terminal block.
Connect the terminal of remote controller (X,Y) with the terminal of indoor unit (X,Y). (X and Y are no polarity)

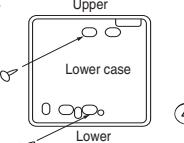


- ⑥ Install the upper case as before so as not to catch up the remote controller cord, and tighten with the screws.



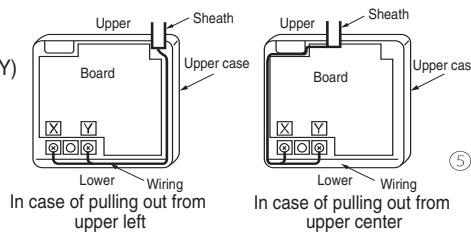
[In case of exposing cord]

- ③ You can pull out the remote controller cord from left upper part or center upper part.
Cut off the upper thin part of remote controller lower case with a nipper or knife, and grind burrs with a file etc.



- ④ Install the lower case to the flat wall with attached two wooden screws.

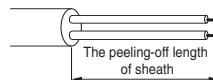
⑤ Connect the remote controller cord to the terminal block.
 Connect the terminal of remote controller (X,Y) with the terminal of indoor unit (X,Y).
 (X and Y are no polarity)
 Wiring route is as shown in the right diagram depending on the pulling out direction.



The wiring inside the remote controller case should be within 0.3mm^2 (recommended) to 0.5mm^2 .
 The sheath should be peeled off inside the remote controller case.

The peeling-off length of each wire is as below.

Pulling out from upper left	Pulling out from upper center
X wiring : 215mm	X wiring : 170mm
Y wiring : 195mm	Y wiring : 190mm



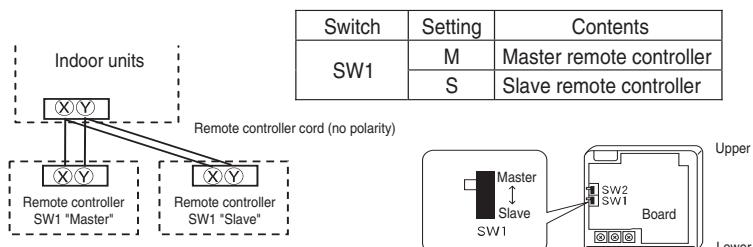
⑥ Install the upper case as before so as not to catch up the remote controller cord, and tighten with the screws.
 ⑦ In case of exposing cord, fix the cord on the wall with cord clamp so as not to slack.

Installation and wiring of remote controller

① Wiring of remote controller should use $0.3\text{mm}^2 \times 2$ core wires or cables. (on-site configuration)
 ② Maximum prolongation of remote controller wiring is 600 m.
 If the prolongation is over 100m, change to the size below.
 But, wiring in the remote controller case should be under 0.5mm^2 . Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.
 100 - 200m $0.5\text{mm}^2 \times 2$ cores
 Under 300m $0.75\text{mm}^2 \times 2$ cores
 Under 400m $1.25\text{mm}^2 \times 2$ cores
 Under 600m $2.0\text{mm}^2 \times 2$ cores

Master/ slave setting when more than one remote controllers are used

A maximum of two remote controllers can be connected to one indoor unit (or one group of indoor units.)



Set SW1 to "Slave" for the slave remote controller. It was factory set to "Master" for shipment.

Note: The setting "Remote controller thermistor enabled" is only selectable with the master remote controller in the position where you want to check room temperature.

The air conditioner operation follows the last operation of the remote controller regardless of the master/ slave setting of it.

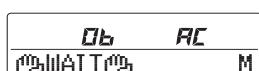
The indication when power source is supplied

When power source is turned on, the following is displayed on the remote controller until the communication between the remote controller and indoor unit settled.

Master remote controller : "WAIT" M"
 Slave remote controller : "WAIT" S"

At the same time, a mark or a number will be displayed for two seconds first.

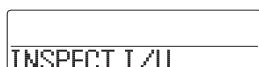
This is the software's administration number of the remote controller, not an error cord.



※ The left mark is only an example. Other marks may appear.

When remote controller cannot communicate with the indoor unit for half an hour, the below indication will appear.

Check wiring of the indoor unit and the outdoor unit etc.



The range of temperature setting

When shipped, the range of set temperature differs depending on the operation mode as below.

Heating : 16~30°C (55~86°F)

Except heating (cooling, fan, dry, automatic) : 18~30°C (62~86°F)

●Upper limit and lower limit of set temperature can be changed with remote controller.

Upper limit setting: valid during heating operation. Possible to set in the range of 20 to 30°C (68 to 86°F).

Lower limit setting: valid except heating (automatic, cooling, fan, dry) Possible to set in the range of 18 to 26°C (62 to 79°F).

When you set upper and lower limit by this function, control as below.

1. When ⑫TEMP RANGE SET, remote controller function of function setting mode is "INDN CHANGE" (factory setting),
【 If upper limit value is set 】

During heating, you cannot set the value exceeding the upper limit.

【 If lower limit value is set 】

During operation mode except heating, you cannot set the value below the lower limit.

2. When ⑫TEMP RANGE SET, remote controller function of function setting mode is "NO INDN CHANGE"

【 If upper limit value is set 】

During heating, even if the value exceeding the upper limit is set, upper limit value will be sent to the indoor unit. But, the indication is the same as the temperature set.

【 If lower limit value is set 】

During except heating, even if the value lower than the lower limit is set, lower limit value will be sent to the indoor unit.

But, the indication is the same as the temperature set.

●How to set upper and lower limit value

1. Stop the air-conditioner, and press (SET) and (MODE) button at the same time for over three seconds .

The indication changes to "FUNCTION SET ▼".

2. Press (▼) button once, and change to the "TEMP RANGE ▲" indication.

3. Press (SET) button, and enter the temperature range setting mode.

4. Select "UPPER LIMIT ▼" or "LOWER LIMIT ▲" by using (▲) (▼) button.

5. Press (SET) button to fix.

6. When "UPPER LIMIT ▼" is selected (valid during heating)

① Indication: " ↴ ▼ ▲ SET UP" → "UPPER 30°C ▼"

② Select the upper limit value with temperature setting button (▼) (▲). Indication example: "UPPER 26°C ▼ ▲" (blinking)

③ Press (SET) button to fix. Indication example: "UPPER 26°C" (Displayed for two seconds)

After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".

7. When "LOWER LIMIT ▲" is selected (valid during cooling, dry, fan, automatic)

① Indication: " ↴ ▼ ▲ SET UP" → "LOWER 18°C ▲"

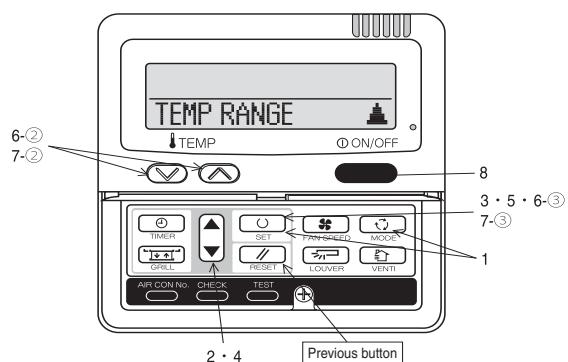
② Select the lower limit value with temperature setting button (▼) (▲). Indication example: "LOWER 24°C ▼ ▲" (blinking)

③ Press (SET) button to fix. Indication for example: "LOWER 24°C" (Displayed for two seconds)

After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".

8. Press [ON/OFF] button to finish.

- It is possible to finish by pressing [ON/OFF] button on the way, but unfinished change of setting is unavailable.
- During setting, if you press (RESET) button, you return to the previous screen.



Note 1: The initial setting marked "※" is decided by connected indoor and outdoor unit, and is automatically defined as following table.

Function No.	Item	Default	Model
Remote controller function02	AUTO RUN SET	AUTO RUN ON AUTO RUN OFF	"Auto-RUN" mode selectable indoor unit. Indoor unit without "Auto-RUN" mode
Remote controller function06	※ FAN SPEED SW	VALID INVALID	Indoor unit with two or three step of air flow setting Indoor unit with only one of air flow setting
Remote controller function07	※ LOUVER SW	VALID INVALID	Indoor unit with automatically swing louver Indoor unit without automatically swing louver
Remote controller function13	I/U FAN	HI-MID-LO HI-LO HI-MID 1 FAN SPEED	Indoor unit with three step of air flow setting Indoor unit with two step of air flow setting Indoor unit with only one of air flow setting
Remote controller function15	MODEL TYPE	HEAT PUMP COOLING ONLY	Heat pump unit Exclusive cooling unit

Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.

But only master indoor unit is received the setting change of indoor unit function "05 EXTERNAL INPUT" and "06 PERMISSION / PROHIBITION".

Indoor unit No. are indicated only when (Indoor unit function) **I/U FUNCTION**  plural indoor units are connected.

Function	setting	
1/U000 	02 FAN SPEED SET	STANDARD <input checked="" type="radio"/> HIGH SPEED 1 <input checked="" type="radio"/> HIGH SPEED 2 <input type="radio"/>
	03 FILTER SIGN SET	INDICATION OFF TYPE 1 <input type="radio"/> TYPE 2 <input type="radio"/> TYPE 3 <input type="radio"/> TYPE 4 <input type="radio"/>
	04  POSITION	4POSITION STOP <input type="radio"/> FREE STOP <input type="radio"/>
	05 EXTERNAL INPUT	LEVEL INPUT <input type="radio"/> PULSE INPUT <input type="radio"/>
	06 OPERATION PERMISSION/PROHIBITION	INVALID <input type="radio"/> VALID <input checked="" type="radio"/>
	07 EMERGENCY STOP	INVALID <input type="radio"/> VALID <input type="radio"/>
	08 ※ SP OFFSET	OFFSET +3.0℃ <input type="radio"/> OFFSET +2.0℃ <input type="radio"/> OFFSET +1.0℃ <input type="radio"/> NO OFFSET <input checked="" type="radio"/>
	09 RETURN AIR TEMP	OFFSET +2.0℃ <input type="radio"/> OFFSET +1.5℃ <input type="radio"/> OFFSET +1.0℃ <input type="radio"/> NO OFFSET <input type="radio"/> OFFSET -1.0℃ <input type="radio"/> OFFSET -1.5℃ <input type="radio"/> OFFSET -2.0℃ <input type="radio"/>
	10 ※ FAN CONTROL	LOW FAN SPEED <input type="radio"/> SET FAN SPEED <input type="radio"/> INTERMITTENCE <input type="radio"/> FAN OFF <input type="radio"/>
	11 FROST PREVENTION TEMP	TEMP HIGH <input type="radio"/> TEMP LOW <input checked="" type="radio"/>
	12 FROST PREVENTION CONTROL	FAN CONTROL ON <input type="radio"/> FAN CONTROL OFF <input type="radio"/>
	13 DRAIN PUMP LINK	※ ※ AND ※ ※ AND ※ AND ※ ※ AND ※
	14 ※ FAN REMAINING	NO REMAINING <input type="radio"/> 0.5 HOUR <input type="radio"/> 1 HOUR <input type="radio"/> 2 HOUR <input type="radio"/> 6 HOUR <input type="radio"/>
	15 ※ FAN REMAINING	NO REMAINING <input type="radio"/> 0.5 HOUR <input type="radio"/> 2 HOUR <input type="radio"/> 6 HOUR <input type="radio"/>
	16 ※ FAN INTERMITTENCE	NO REMAINING <input type="radio"/> 2minOFF sminON <input type="radio"/> sminOFF sminON <input type="radio"/>
	17 PRESSURE CONTROL	STANDARD <input checked="" type="radio"/> TYPE! <input checked="" type="radio"/>

Note2: Fan setting of "HIGH SPEED"

Fan tap	Indoor unit air flow setting				
	STANDARD	PHi - Hi - Me - Lo	Hi - Me - Lo	Hi - Lo	Hi - Me
FAN SPEED SET	HIGH SPEED1,2	PHi - PHi - Hi - Me	PHi - Hi - Me	PHi - Me	PHi - Hi

Initial function setting of some indoor unit is "HIGH SPEED".
4 speed is not able to be set with wireless remote controller or simple remote controller (RCH-H3).

The filter sign is indicated after running for 180 hours.
The filter sign is indicated after running for 600 hours.
The filter sign is indicated after running for 1000 hours.
The filter sign is indicated after running for 1000 hours, then the indoor unit will be stopped by compulsion after 24 hours.

If you change the indoor function "04  POSITION", you must change the remote controller function "14  POSITION" accordingly.
You can select the louver stop position in the four.
The louver can stop at any position.

Permission/prohibition control of operation will be valid.

With the VRF series, it is used to stop all indoor units connected with the same outdoor unit immediately.
When stop signal is inputed from remote on-off terminal "CNT-6", all indoor units are stopped immediately.

To be reset for producing +3.0℃ increase in temperature during heating.
To be reset for producing +2.0℃ increase in temperature during heating.
To be reset for producing +1.0℃ increase in temperature during heating.

To be reset producing +2.0℃ increase in return air temperature of indoor unit.
To be reset producing +1.5℃ increase in return air temperature of indoor unit.
To be reset producing +1.0℃ increase in return air temperature of indoor unit.

To be reset producing -1.0℃ increase in return air temperature of indoor unit.
To be reset producing -1.5℃ increase in return air temperature of indoor unit.
To be reset producing -2.0℃ increase in return air temperature of indoor unit.

When heating thermostat is OFF, to be operated with low fan speed. (or with ultra low fan speed in case of some models)
When heating thermostat is OFF, to be operated with set fan speed.

When heating thermostat is OFF, fan speed is operated intermittently.
When heating thermostat is OFF, the fan is stopped.
When the remote thermistor is working, "FAN OFF" is set automatically.
Do not set "FAN OFF" when the indoor unit's thermistor is working.

Change of indoor heat exchanger temperature to start frost prevention control.

Working only with the Single split series.
To control frost prevention, the indoor fan tap is raised.

Drain pump is run during cooling and dry.
Drain pump is run during cooling, dry and heating.
Drain pump is run during cooling, dry, heating and fan.
Drain pump is run during cooling, dry and fan.

After cooling is stopped or cooling thermostat is OFF, the fan does not perform extra operation.
After cooling is stopped or cooling thermostat is OFF, the fan perform extra operation for half an hour.
After cooling is stopped or cooling thermostat is OFF, the fan perform extra operation for an hour.
After cooling is stopped or cooling thermostat is OFF, the fan perform extra operation for six hours.

After heating is stopped or heating thermostat is OFF, the fan does not perform extra operation.
After heating is stopped or heating thermostat is OFF, the fan perform extra operation for half an hour.
After heating is stopped or heating thermostat is OFF, the fan perform extra operation for two hours.
After heating is stopped or heating thermostat is OFF, the fan perform extra operation for six hours.

During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after twenty minutes' OFF.
During heating is stopped or heating thermostat is OFF, the fan perform intermittent operation for five minutes with low fan speed after five minutes' OFF.

Connected "OA Processing" type indoor unit, and is automatically defined.

How to set function

1. Stop air-conditioner and press **(SET)** **(MODE)** buttons at the same time for over three seconds, and the "FUNCTION SET ▼" will be displayed.

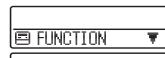


2. Press **(SET)** button.

3. Make sure which do you want to set, "FUNCTION ▼" (remote controller function) or "I/U FUNCTION ▲" (indoor unit function).

4. Press **▲** or **▼** button.

Select "FUNCTION ▼" (remote controller function) or "I/U FUNCTION ▲" (indoor unit function).



5. Press **(SET)** button.

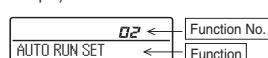
6. [On the occasion of remote controller function selection]

① "DATA LOADING" (Indication with blinking)

↓
Display is changed to "01 GRILLE ↑↓SET".

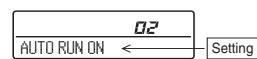
② Press **▲** or **▼** button.

"No. and function" are indicated by turns on the remote controller function table, then you can select from them.
(For example)



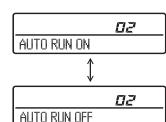
③ Press **(SET)** button.

The current setting of selected function is indicated.
(for example) "AUTO RUN ON" ← If "02 AUTO RUN SET" is selected



④ Press **▲** or **▼** button.

Select the setting.

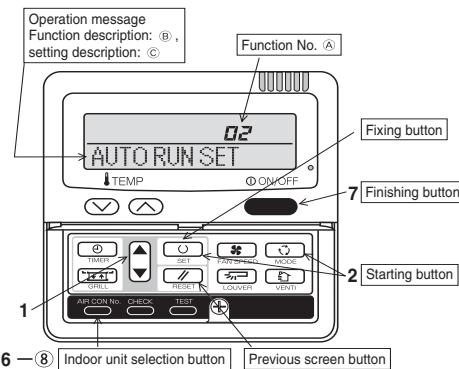


⑤ Press **(SET)** button.

"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, Set as the same procedure if you want to set continuously, and if to finish, go to 7.

**7. Press **ON/OFF** button.**

Setting is finished.

**[On the occasion of indoor unit function selection]**

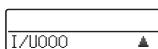
① "DATA LOADING" (Blinking for 2 to 23 seconds to read the data)

↓
Indication is changed to "02 FAN SPEED SET".

Go to ②.

[Note]

(1) If plural indoor units are connected to a remote controller, the indication is "I/U 000" (blinking) ← The lowest number of the indoor unit connected is indicated.



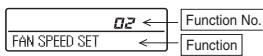
(2) Press **▲** or **▼** button.

Select the number of the indoor unit you are to set
If you select "ALL UNIT ▼", you can set the same setting with all unites.

(3) Press **(SET)** button.

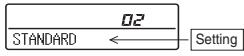
② Press **▲** or **▼** button.

"No. and function" are indicated by turns on the indoor unit function table, then you can select from them.
(For example)



③ Press **(SET)** button.

The current setting of selected function is indicated.
(For example) "STANDARD" ← If "02 FAN SPEED SET" is selected.



④ Press **▲** or **▼** button.

Select the setting.

⑤ Press **(SET)** button.

"SET COMPLETE" will be indicated, and the setting will be completed.
Then after "No. and function" indication returns, set as the same procedure if you want to set continuously, and if to finish, go to 7.



※ When plural indoor units are connected to a remote controller, press the **[AIRCON NO.]** button, which allows you to go back to the indoor unit selection screen. (example "I/U 000 ▲")

- It is possible to finish by pressing **[ON/OFF]** button on the way, but unfinished change of setting is unavailable.
- During setting, if you press **(RESET)** button, you return to the previous screen.
- Setting is memorized in the controller and it is saved independently of power failure.

[How to check the current setting]

When you select from "No. and function" and press set button by the previous operation, the "Setting" displayed first is the current setting.

(But, if you select "ALL UNIT ▼", the setting of the lowest number indoor unit is displayed.)

12.2 Wireless kit (FDTC series : RCN-TC-24W-ER)

Notes :

Following functions of FDTC Type-D indoor unit series are not able to be set with this wireless remote controller (RCN-TC-24W-ER).

1. Individual flap control system
2. 4-fan speed setting (PHi/Hi/Me/Lo) → 3-fan speed setting (Hi/Me/Lo)

PJA012D758

⚠ WARNING

- Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.
Loose connection or hold will cause abnormal heat generation or fire.
- Make sure the power supply is turned off when electric wiring work.
Otherwise, electric shock, malfunction and improper running may occur.

⚠ CAUTION

- DO NOT install the wireless kit at the following places in order to avoid malfunction.
 - (1) Places exposed to direct sunlight
 - (2) Places near heat devices
 - (3) High humidity places
 - (4) Hot surface or cold surface enough to generate condensation
 - (5) Places exposed to oil mist or steam directly
 - (6) Uneven surface
 - (7) Places affected by the direct airflow of the AC unit.
 - (8) Places where the receiver is influenced by the fluorescent lamp (especially inverter type) or sunlight.
 - (9) Places where the receiver is affected by infrared rays of any other communication devices
 - (10) Places where some object may obstruct the communication with the remote controller
- DO NOT leave the wireless kit without the cover.
In case the cover needs to be detached, protect the receiver with a packaging box or bag in order to keep it away from water and dust.

Note

- Instruct the customer how to operate it correctly referring to the instruction manual.
- For the installation method of the air conditioner itself, refer to the installation manual enclosed in the package.

① Accessories

Please make sure that you have all of the following accessories.

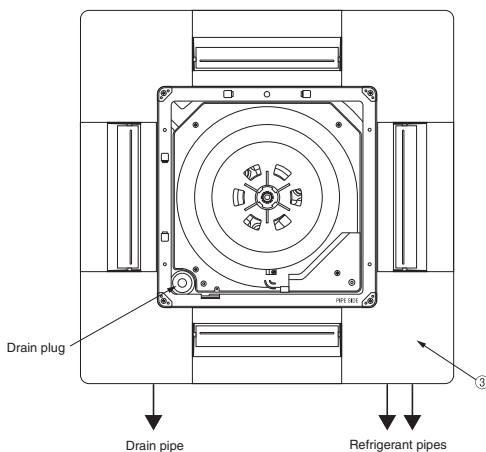
Receiver		1	Remote controller holder		1
Wireless remote controller		1	Wood screw for holder		2
Parts set		1	AAA dry cell battery (R03)		2

② How to install the receiver

The receiver can be installed by replacing with a corner panel on the applicable decorative panel.

Preparation before installation

- ① Attach the decorative panel onto the air conditioner according to the installation manual for the panel.
- ② Remove the air return grille.
- ③ Remove a corner panel located on the refrigerant pipes side.
- ④ Remove two screws and detach the lid from the control box of the air conditioner.



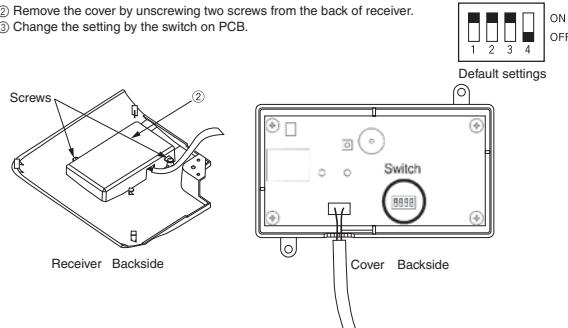
Setting on site

① PCB on the receiver has the following switches to set the functions. Default setting is shown with mark.

S W 1	Customized signal setting to avoid mixed communication	<input checked="" type="checkbox"/> ON : Normal <input type="checkbox"/> OFF : Remote
S W 2	Receiver master/slave setting	<input checked="" type="checkbox"/> ON : Master <input type="checkbox"/> OFF : Slave
S W 3	Buzzer valid/Invalid	<input checked="" type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid
S W 4	Auto restart	<input checked="" type="checkbox"/> ON : Valid <input type="checkbox"/> OFF : Invalid

<To change the settings>

- ② Remove the cover by unscrewing two screws from the back of receiver.
- ③ Change the setting by the switch on PCB.



④ When SW1 is turned to OFF position, change the corresponding remote controller setting as follows:

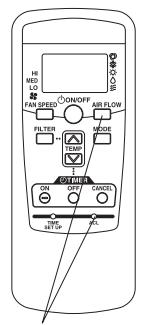
How to change the remote controller setting
Pressing **[ACL]** switch with **[AIR FLOW]** button kept pressing or inserting the batteries with pressing **[AIR FLOW]** button will customize the signal.

Note

※ When the batteries are removed, the setting will return to the default setting.
Please make sure to reset it when the batteries are replaced.

Caution

Instruct the customer to set the mentioned above when replacing the batteries.
(How to set is also mentioned in the user's manual attached on the air conditioner.)

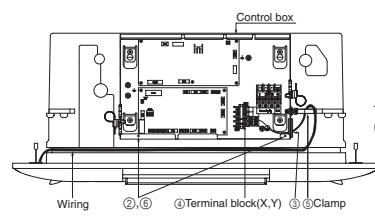
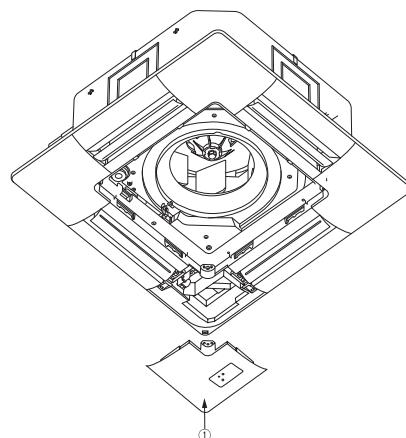


Radio interference prevention mode

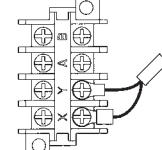
Installation of the receiver

- ① Attach the receiver to the panel according to the panel installation manual.
- ② Remove two screws and detach the lid from the control box.
- ③ Put the wiring in the control box with other wiring as shown below.
- ④ Connect the wiring to the terminal block (X,Y) provided in the control box.(Non-polarized)
- ⑤ Fix the wiring with the clamp as shown below.
- ⑥ Reattach the control box lid with 2 screws removed.

※ Note: Make sure wires not to be pinched by any other parts like panel and control box.



Terminal block (X,Y) in the indoor unit control box



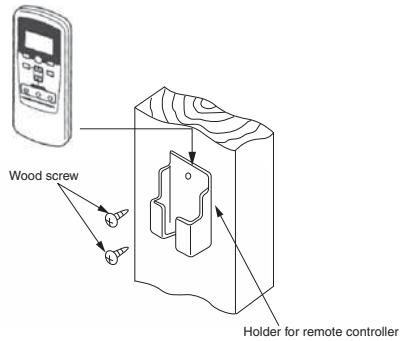
③ Remote controller

Installation of the controller holder

Caution

DO NOT install it on the following places
 1. Places exposed to direct sunlight
 2. Places near heat devices
 3. High humidity places

4. Hot surface or cold surface enough to generate condensation
 5. Places exposed to oil mist or steam directly.
 6. Uneven surface

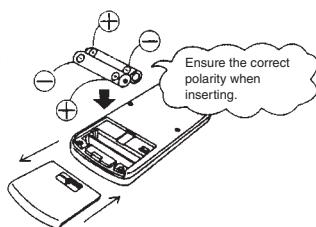


Installation tips for the remote controller holder

- Adjust and keep the holder upright
- Tighten the screw to the end to avoid scratching the remote controller.
- DO NOT attach the holder on plaster wall.

How to insert batteries

- ① Detach the back lid.
- ② Insert the batteries. (two AAA batteries)
- ③ Reattach the back lid.

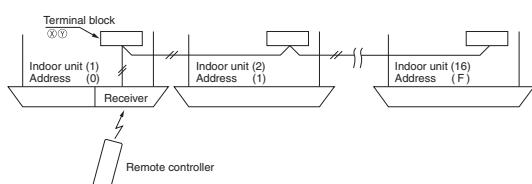


Control plural indoor units with one remote controller

Up to 16 indoor units can be connected.

- ① Connect the XY terminal with 2-core wire. As for the size, refer to the following note.
- ② For Single packaged air conditioner series, set the indoor unit address with SW2 on the indoor unit PCB from [0] to [F] so as not to duplicate.

Restrictions on the thickness and length of wire (Maximum total extension 600m.)	
Standard	Within 100m x 0.3 mm ²
	Within 200m x 0.5 mm ²
	Within 300m x 0.75mm ²
	Within 400m x 1.25mm ²
	Within 600m x 2.0 mm ²



- ③ For VRF series, set the indoor unit address with SW1, SW2 and SW5-2 on the indoor unit PCB from [000] to [127] so as not to duplicate.

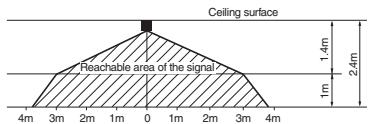
Master/Slave setting when using plural remote controllers

Up to two receivers can be installed in one indoor unit group.
 When two receivers are used, it is necessary for a receiver to turn OFF SW2 on the receiver PCB to set it as slave.

(For the method of switching, please see **Setting on site** in the section of
 ② How to install the receiver in this manual.)

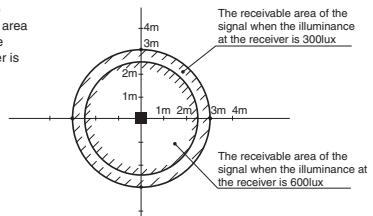
Wireless remote controller's operable area

① Standard reachable area of the signal
 [condition] Illuminance at the receiver: 300lux
 (when no lighting is installed within 1m of the receiver in an ordinary office.)



② Correlation between illuminance at the receiver and reachable area of the signal in a plain view.

The drawing in the right shows the correlation between the reachable area of the signal and illuminance at the receiver when the remote controller is operated at 1m high under the condition of ceiling height of 2.4m.



③ Installation tips when several receivers are installed close

Minimum distance between the indoor units which can avoid cross communication is 5m under the condition of 300lux of illuminance at the receiver.
 (When no lighting is installed within 1m of the receiver in an ordinary office.)

④ How to disable the Auto mode operation

VRF series (except heat recovery 3-pipe systems) cannot be operated in Auto mode.

Make sure to set the remote controller for the models so as not to be able to choose Auto mode.

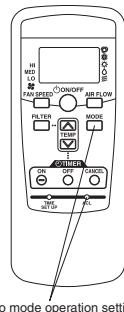
Pressing **[ACL]** switch with **[MODE]** button kept pressing or inserting the batteries with pressing **[MODE]** button will make auto mode operation.

Note

※ When the batteries are removed, the setting will return to the default setting (Auto mode is valid).

Caution

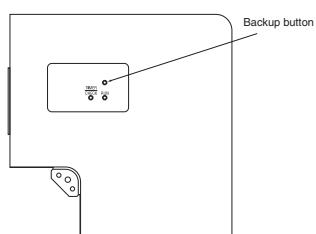
Instruct the customer to set the mentioned above when replacing the batteries. (How to set is also mentioned in the user's manual attached on the air conditioner.)



⑤ Backup button

A Backup button is provided on the receiver. Even when the operation from the wireless remote controller is not possible (due to flat batteries, controller lost, or controller failure), still it possible to operate as temporary means. Press the button directly when operating it.

- (1) The air conditioner starts the operation with the condition of Auto mode, 23°C of set point, High fan speed and horizontal louver position.
- (2) The air conditioner stops the operation when the button is pressed when in operation.



⑥ Cooling test run operation

- After safety confirmation, turn on the power.
- Transmit a cooling operation command with wireless remote controller, while the backup button on the receiver is pressed.
- If the backup button on the receiver is pressed during a test run, it will end the test run.
- If you cannot operate the unit properly during a test run, please check by consulting with inspection guides on the wiring diagram of outdoor units.

⑦ How to read the two-digit display

On the receiver of a wireless kit, a two-digit (7-segment) display is provided.

- (1) An indication will be displayed for one hour after power on.
- (2) An indication will be displayed for 3.5 seconds after transmitting a "STOP" command from the wireless remote controller or the operation of the backup button to stop the unit.
- (3) An indication appearing in (1) or (2) above will go off as soon as the unit starts operation.
- (4) When there are no error records to indicate, addresses of all the connected units are displayed.
- (5) When there are some error records remaining, the error records are displayed.
- (6) Error records can be cleared by transmitting a "STOP" command from the wireless remote controller, while the backup button is pressed.

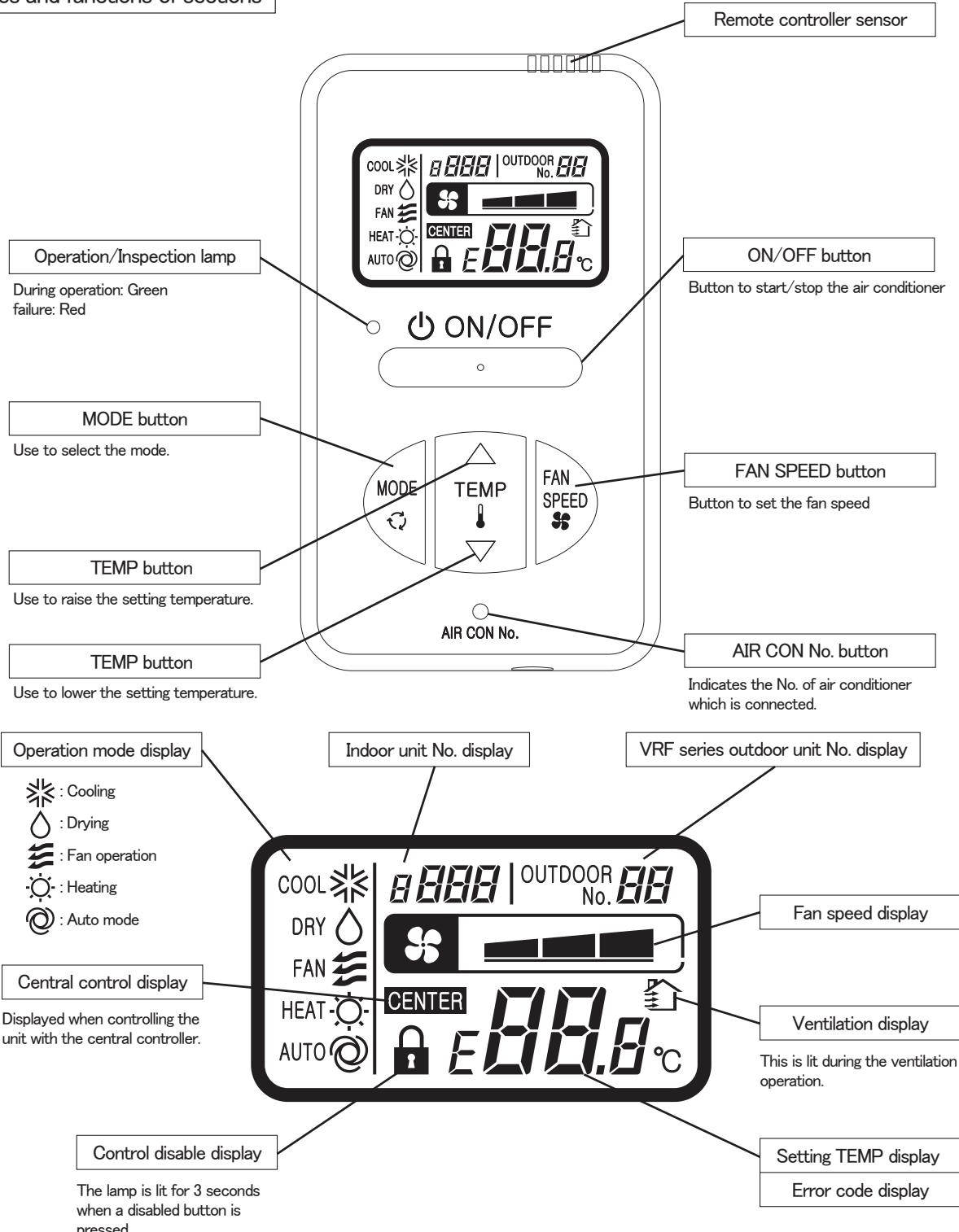
12.3 Simple wired remote controller (FDTC series : RCH-E3)

Notes :

Following functions of Type-D indoor unit series are not able to be set with this simple wired remote controller (RCH-E3).

1. Individual flap control system (for FDTC)
2. 4-fan speed setting (PHi/Hi/Me/Lo) → 3-fan speed setting (Hi/Me/Lo) (for FDTC)

Names and functions of sections



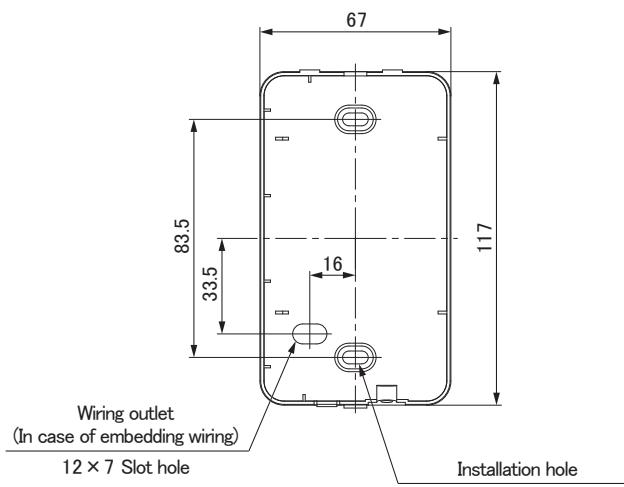
Installation of remote controller

DO NOT install the remote controller at the following places in order to avoid malfunction.

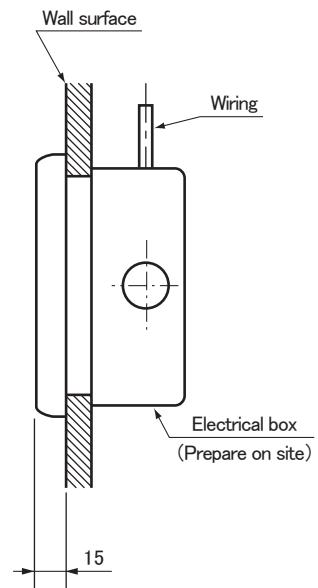
- (1) Places exposed to direct sunlight
- (2) Places near heat devices
- (3) High humidity places
- (4) Hot surface or cold surface enough to generate condensation
- (5) Places exposed to oil mist or steam directly
- (6) Uneven surface

PJZ000Z272

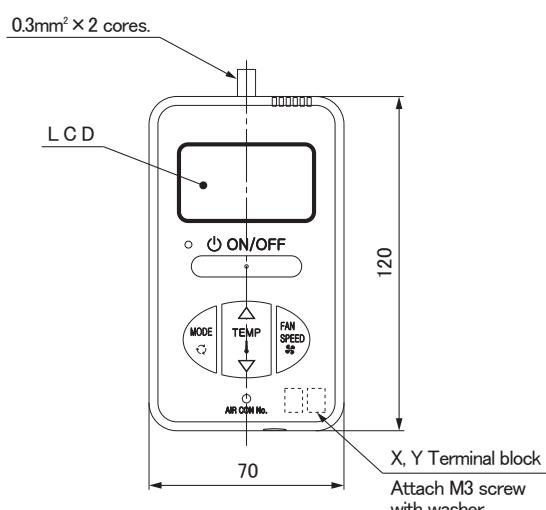
Remote control installation dimensions



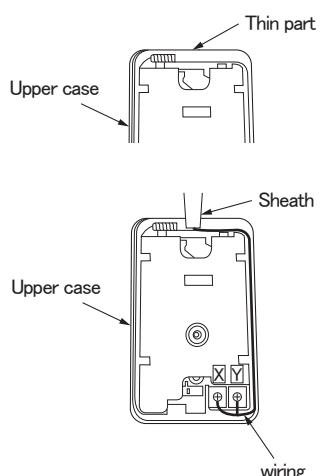
In case of embedding wiring



In case of exposing wiring

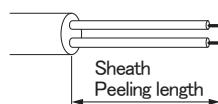


The remote controller wiring can be extracted from the upper center. After the thin part in the upper side of the remote controller upper case is scraped with a nipper or knife, remove burr with a file.



The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm



Wiring specifications

(1) Wiring of remote controller should use $0.3\text{mm}^2 \times 2$ core wires or cables. (on-site configuration)
 (2) Maximum prolongation of remote controller wiring is 600m.

If the prolongation is over 100m, change to the size below.

But, the wiring in the remote controller case should be 0.3mm^2 (recommended) to 0.5mm^2 .

Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

Unit:mm

Length	Wiring thickness
100 to 200m	$0.5\text{mm}^2 \times 2$ cores
Under 300m	$0.75\text{mm}^2 \times 2$ cores
Under 400m	$1.25\text{mm}^2 \times 2$ cores
Under 600m	$2.0\text{mm}^2 \times 2$ cores

Adapted to **RoHS** directive

Simple Remote Controller Installation Manual

PJZ012D069

Read together with indoor unit's installation manual.

WARNING

Fasten the wiring to the terminal securely and hold the cable securely so as not to apply unexpected stress on the terminal.



Loose connection or hold will cause abnormal heat generation or fire.

Make sure the power supply is turned off when electric wiring work.



Otherwise, electric shock, malfunction and improper running may occur.

CAUTION

DO NOT install the remote controller at the following places in order to avoid malfunction.

(1) Places exposed to direct sunlight	(4) Hot surface or cold surface enough to generate condensation
(2) Places near heat devices	(5) Places exposed to oil mist or steam directly
(3) High humidity places	(6) Uneven surface



DO NOT leave the remote controller without the upper case.

In case the upper case needs to be detached, protect the remote controller with a packaging box or bag in order to keep it away from water and dust.

Accessories

Remote controller, wood screw ($\phi 3.5 \times 16$) 2 pieces

Prepare on site

Remote controller cord (2 cores) (Refer to [2. Installation and wiring of remote controller])

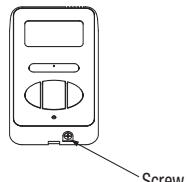
[In case of embedding cord] Electrical box, M4 screw (2 pieces)

[In case of exposing cord] Cord clamp (if needed)

1. Installation procedure

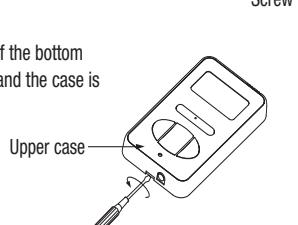
In case of embedding cord

Make certain to remove the screw on the bottom surface of the remote controller.

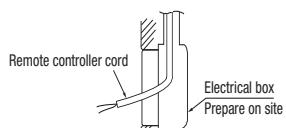


Remove the upper case of the remote controller.

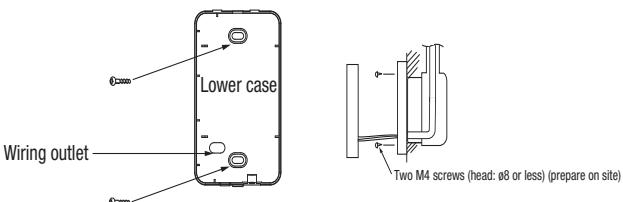
Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote controller and slightly twist it, and the case is removed.



Pre-bury the electrical box and remote controller cord.



Prepare two M4 screws (recommended length: 12 – 16mm), and install the lower case to the electrical box. Do not use a screw whose screw head is larger than the height of the wall around the screw hole.



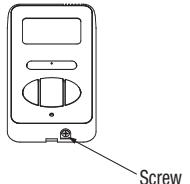
Connect the remote controller cord to the terminal block.

Connect the terminals (X and Y) of the remote controller and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)

Mount the upper case for restoring to its former state so as not to crimp the remote controller cord, and secure with the removed screw.

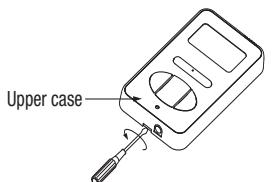
In case of exposing cord

Make certain to remove a screw on the bottom surface of the remote controller.



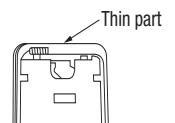
Remove the upper case of the remote controller.

Insert a flat-blade screwdriver to a concave portion of the bottom surface of the remote control and slightly twist it, and the case is removed.

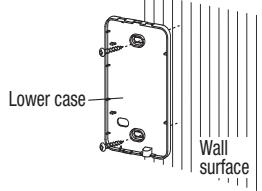


The remote controller cord can be extracted from the upper center.

After the thin part in the upper side of the remote controller upper case is scraped with a nipper or knife, remove burr with a file.



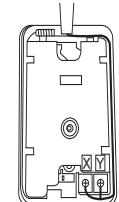
The lower case of the remote controller is mounted to a flat wall with two accessory wood screws.



Connect the remote controller cord to the terminal block.

Connect the terminals (X and Y) of the remote controller and the terminals (X and Y) of the indoor unit. (No polarity of X and Y)

The wiring route is as shown in the right.

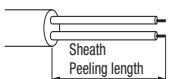


The wiring in the remote controller case should be 0.3 mm^2 (recommended) to 0.5 mm^2 at maximum.

Further, peel off the sheath.

The peeling length of each wiring is as follows:

X wiring : 160mm
Y wiring : 150mm



Mount the upper case for restoring to its former state so as not to crimp the remote controller cord, and secure with the removed screw.

In the case of exposing installation, secure the remote controller cord to the wall surface with a cord clamp so as not to loosen the remote controller cord.

2. Installation and wiring of remote controller

Wiring of remote controller should use $0.3 \text{ mm}^2 \times 2$ core wires or cables. (on-site configuration)

Maximum prolongation of remote controller wiring is 600 m.

If the prolongation is over 100m, change to the size below.

But, the wiring in the remote controller case should be 0.3 mm^2 (recommended) to 0.5 mm^2 .

Change the wire size outside of the case according to wire connecting. Waterproof treatment is necessary at the wire connecting section. Be careful about contact failure.

100 – 200m..... $0.5 \text{ mm}^2 \times 2$ cores

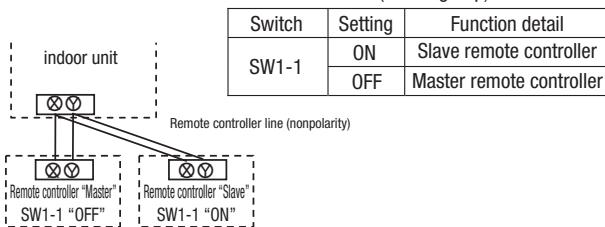
Under 300m..... $0.75 \text{ mm}^2 \times 2$ cores

Under 400m..... $1.25 \text{ mm}^2 \times 2$ cores

Under 600m..... $2.0 \text{ mm}^2 \times 2$ cores

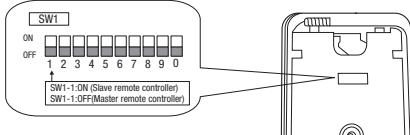
3. Master/ slave setting when more than one remote controller are used

Up to two remote controllers can be connected to one unit (or one group) of indoor unit.



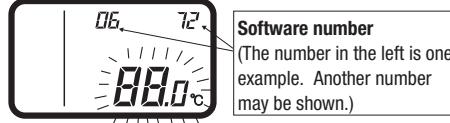
Set the switch SW1-1 of the slave remote controller is "Slave" (ON). The factory default is set as "Master" (OFF).

(Note) • The remote controller thermistor enabled setting can be set only to the master remote controller.
 • Install the master remote controller at the position to detect room temperature.
 • The air conditioner operation follows the last operation of the remote controller in case of the master / slave setting.

**4. The indication when power source is supplied**

At the time of turning the power source on, after the light is on for the first 2 seconds, the display becomes as shown below.

The number displayed on the upper side of LCD in the remote control is the software number, and this is not an error code.



Software number
(The number in the left is one example. Another number may be shown.)

Then, "88.0 °C" blinks on the remote controller until the communication between the remote controller and the indoor unit is established.

In the case of connecting one remote controller with one unit (or one group) of indoor unit, make certain to set the master remote controller (factory default).

If the slave remote control is set, a communication cannot be established.

If a state where the communication between the remote controller and the indoor unit cannot be established continues about for 30 minutes, "E" is displayed. Confirm the wiring of the indoor unit and the outdoor unit and master/slave setting of the remote controller.

**5. Confirmation method for return air temperature**

Return air temperature can be confirmed by the remote controller operation.

Press **AIR CON NO.** button for over 5 seconds.

"88" blinks on the temperature setting indicator.

("88" blinks for approximately 2 seconds while data is read.)



Then, the return air temperature is displayed.

(Example) return air temperature: "27 °C" (blinking)

(Note) For the return air temperature, in the normal case, the return air temperature of the indoor unit is displayed; however, in the case that the remote control thermistor is effective, detected temperature by the remote controller thermistor is displayed.

Press **ON/OFF** button.

End.

[In the case that the remote thermistor is ineffective and plural indoor units are connected to one remote controller]

Press **AIR CON NO.** button for over 5 seconds.

indoor unit No. indicator: "U 000" (blinking)

(Among the connected indoor units, the lowest number is displayed.)

Press **TEMP** or **TEMP** button.

Select the indoor unit No.

Press **MODE** button.

Decide the indoor unit No.

(Example) indoor unit No. indicator: "U 000"

"88" blinks on the temperature setting indicator. (blinking for approximately 2 to 10 seconds while data is read) Then, the return air temperature is displayed. When **AIR CON NO.** is pressed, return to the indoor unit selection display (example, "U 000").



Press **ON/OFF** button.

End.

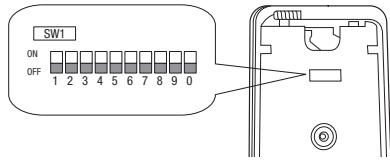
6. Function setting

Each function of the remote controller and the indoor unit is automatically set to the initial setting, which is the standard use, on the occasion of connecting the remote controller with the indoor unit. In the case of the standard use, the setting change is unnecessary. However, if you would like to change the initial setting " ", change the setting for only the item of the function number. Record the setting contents and stored them.

Function setting item by switch on PCB

Switch No.	Setting	Setting detail	Initial setting
SW1-1	ON	Slave remote controller	
	OFF	Master remote controller	
SW1-2	ON	Remote controller thermistor enabled	
	OFF	Remote controller thermistor disabled	
SW1-3	ON	"MODE" button prohibited	
	OFF	"MODE" button enabled	
SW1-4	ON	"ON/OFF" button prohibited	
	OFF	"ON/OFF" button enabled	

Switch No.	Setting	Setting detail	Initial setting
SW1-5	ON	"TEMP" button prohibited	
	OFF	"TEMP" button enabled	
SW1-6	ON	"FAN SPEED" button prohibited	Note 1
	OFF	"FAN SPEED" button enabled	Note 1
SW1-7	ON	Auto restart function enabled	
	OFF	Auto restart function disabled	
SW1-8, 9, 0	ON	Not used	
SW1-8, 9, 0	OFF	Not used	



- As for the slave remote controller, function setting is impossible other than SW1-1.
- In the indoor unit with only one fan speed, "FAN SPEED" button cannot be enabled.

Function setting item by button operation

Classification	Function No.	Function	Setting No.	Setting	Initial setting	Remarks
Remote controller function	01	Indoor unit fan speed	01	Fan speed: three steps	Note 1	The fan speed is three steps, 0000 - 0001 - 0010 .
			02	Fan speed: two steps (Hi-Lo)	Note 1	The fan speed is two steps, 0000 - 0010 .
			03	Fan speed: two steps (Hi-Me)		The fan speed is two steps, 0000 - 0011 .
			04	Fan: one step	Note 1	The fan speed is fixed to one step.
	03	Remote controller thermistor at the time of cooling	01	Remote controller thermistor: no offset		
			02	Remote controller thermistor: +3.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +3.0°C.
			03	Remote controller thermistor: +2.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +2.0°C.
			04	Remote controller thermistor: +1.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at +1.0°C.
			05	Remote controller thermistor: -1.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at -1.0°C.
			06	Remote controller thermistor: -2.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at -2.0°C.
			07	Remote controller thermistor: -3.0 °C		At the time of cooling, in the case of remote controller thermistor enabled, offset temperature at -3.0°C.
	04	Remote controller thermistor at the time of heating	01	Remote controller thermistor: no offset		
			02	Remote controller thermistor: +3.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +3.0°C.
			03	Remote controller thermistor: +2.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +2.0°C.
			04	Remote controller thermistor: +1.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at +1.0°C.
			05	Remote controller thermistor: -1.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -1.0°C.
			06	Remote controller thermistor: -2.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -2.0°C.
			07	Remote controller thermistor: -3.0 °C		At the time of heating, in the case of remote controller thermistor enabled, offset temperature at -3.0°C.
Indoor unit function	05	Ventilation setting	01	No ventilator connection		
			02	Ventilator links air-conditioner		In case of Single split series, by connecting ventilation device to CNT of the indoor printed circuit board (in case of VRF series, by connecting it to CND of the indoor printed circuit board), the operation of ventilation device is linked with the operation of indoor unit.
	06	"Auto" operation setting	01	"Auto" operation enabled	Note 1	
			02	"Auto" operation disabled	Note 1	"Auto" operation disabled
	07	Operation permission/prohibition	01	Disabled		
			02	Enabled		Operation permission/prohibition controller is enabled.
	08	External input	01	Level input		
			02	Pulse input		
	09	Fan speed setting	01	Standard	Note 2	
			02	High speed 1	Note 2	
			03	High speed 2	Note 2	
	10	Fan remaining operation at the time of cooling	01	No remaining operation		After cooling stopped, no fan remaining operation
			02	0.5 hours		After cooling stopped, fan remaining operation for 0.5 hours
			03	1 hour		After cooling stopped, fan remaining operation for 1 hour
			04	6 hours		After cooling stopped, fan remaining operation for 6 hours
	11	Fan remaining operation at the time of heating	01	No remaining operation		After heating stopped or after heating thermostat OFF, no fan remaining operation
			02	0.5 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 0.5 hours
			03	2 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 2 hours
			04	6 hours		After heating stopped or after heating thermostat OFF, fan remaining operation for 6 hours
	12	Setting temperature offset at the time of heating	01	No offset		
			02	Setting temperature offset + 3.0 °C		The setting temperature at the time of heating is offset by +3.0 °C.
			03	Setting temperature offset + 2.0 °C		The setting temperature at the time of heating is offset by +2.0 °C.
			04	Setting temperature offset + 1.0 °C		The setting temperature at the time of heating is offset by +1.0 °C.
	13	Heating fan controller	01	Low fan speed	Note 1	At the time of heating thermostat OFF, operate with low fan speed.
			02	Setting fan speed		At the time of heating thermostat OFF, operate with the setting fan speed.
			03	Intermittent operation	Note 1	At the time of heating thermostat OFF, intermittently operate.
			04	Fan off		At the time of heating thermostat OFF, a fan will be stopped. When the remote controller thermistor is enabled, automatically set to "Fan off". Do not set at the time of the indoor unit thermistor.
	14	Return air temperature offset	01	No offset		
			02	Return air temperature offset +2.0 °C		Offset the return air temperature of the indoor unit by +2.0 °C.
			03	Return air temperature offset +1.5 °C		Offset the return air temperature of the indoor unit by +1.5 °C.
			04	Return air temperature offset +1.0 °C		Offset the return air temperature of the indoor unit by +1.0 °C.
			05	Return air temperature offset -1.0 °C		Offset the return air temperature of the indoor unit by -1.0 °C.
			06	Return air temperature offset -1.5 °C		Offset the return air temperature of the indoor unit by -1.5 °C.
			07	Return air temperature offset -2.0 °C		Offset the return air temperature of the indoor unit by -2.0 °C.

Note 1: The symbol " " in the initial setting varies depending upon the indoor unit and the outdoor unit to be connected, and this is automatically determined as follows:

Switch No. Function No.	Function	Setting	Product model
SW1-6	"FAN SPEED" button	"FAN SPEED" button prohibited	Product model whose indoor fan speed is only one step
		"FAN SPEED" button enabled	Product model whose indoor fan speed is two steps or three steps
Remote controller function 01	Indoor unit fan speed	Fan speed: three steps	Product model whose indoor unit fan speed is three steps
		Fan speed: two steps (Hi-Lo)	Product model whose indoor unit fan speed is two steps
		Fan speed: two steps (Hi-Me)	Product model whose indoor unit fan speed is only one step
Remote controller function 06	"Auto" operation setting	"Auto" operation enabled	Product model where "Auto" mode is selectable
Indoor unit function 13	Heating fan control	Low fan speed	Product model except FDUS
		Intermittent operation	FDUS

Note 2: Fan speed of "High speed" setting

Fan speed setting	0000 - 0001 - 0010	0000 - 0010	0000 - 0011
	Standard	Hi - Mid - Lo	Hi - Lo
High speed 1 + 2	UHi - H - Mid	UHi - Mid	UHi - Hi

Initial setting of some indoor unit is "High speed".

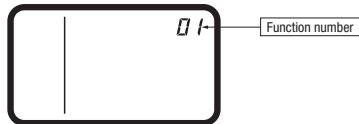
Note 3: As for plural indoor unit, set indoor functions to each master and slave indoor unit.

But only master indoor unit is received the setting change of indoor unit function "07 Operation permission/prohibition" and "08 External input".

7. How to set functions by button operation

Stop air-conditioning, and simultaneously press **AIR CON NO.** and **MODE** buttons at the same time for over three seconds.

The function number "01" blinks in the upper right.

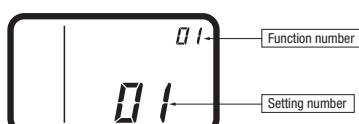


Press **TEMP** or **TEMP** button.
Select the function number.

Press **MODE** button.
Decide the function number.

[In the case of selecting the remote controller function (01-06)]

The current setting number of the selected function number blinks
(Example)
Function number: "01" (lighting)
Setting number: "01" (blinking)



Press **TEMP** or **TEMP** button.
Select the setting number.

Press **MODE** button.
The setting is completed.

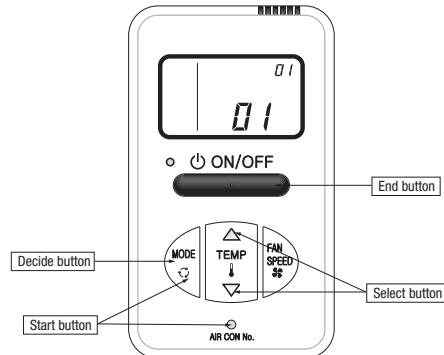
Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Function number: "01" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Then, the screen goes back to the function number blinking indication , if the setting is sequentially conducted, continue with the same procedures. If the setting is finished, proceed to .



[In the case of selecting the indoor unit function (07-14)]

"88" blinks on the temperature setting indicators.
(blinking for approximately 2 to 10 seconds while data is read)

After that, the current setting number of the selected function number blinks.
(Example)

Function number: "07" (lighting)
Setting number: "01" (blinking)

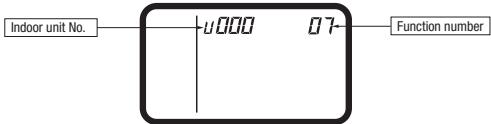


Proceed to .

[Note]

a. In the case of connecting one remote control to plural indoor units, the display will be as follows:

Indoor unit No. display: "U 000" (blinking)
(Display the lowest number among the connected indoor units.)



b. Press **TEMP** or **TEMP** button.

Select the indoor unit No. to be set.

If "U ALL" is selected, the same setting can be set to all units.

c. Press **MODE** button.

Decide the indoor unit No.

"88" blinks on the temperature setting indicators. (blinking for 2 to 10 seconds while data is read)

When **AIR CON NO.** button is pressed, go back to the indoor unit selection display (for example, "U 000" blinking).

Press **TEMP** or **TEMP** button.

Select the setting number

Press **MODE** button.

The setting is completed.

Light is on for approximately 3 to 20 seconds while data of the decided function No. and setting No. is transmitted.

(Example)

Indoor unit No.: "U 000" (lighting for 3 to 20 seconds)
Function number: "07" (lighting for 3 to 20 seconds)
Setting number: "01" (lighting for 3 to 20 seconds)



Press **ON/OFF** button.
The setting is completed.

- Even if **ON/OFF** button is pressed during setting, the setting is ended. However, any details where the setting has not been completed will be ineffective.
- The setting contents are stored in the controller, and even if the power failure occur, this will not be lost.

[Confirmation method for current setting]

According to the operation, the "setting number" displayed first after selecting "function number" and pressing **MODE** button is the currently set content.
(However, in the case of selecting "U ALL" (all units), the setting number of the lowest number among the indoor units is displayed.)

12.4 Interface kit (SC-BIKN-E)

RKZ012A088 

Accessories included in package

Be sure to check all the accessories included in package.

No.	Part name	Quantity
①	Indoor unit's connection cable (cable length: 1.8m)	1
②	Wood screws (for mounting the interface: Ø4x 25)	2
③	Tapping screws (for the cable clamp and the interface mounting bracket)	3
④	Interface mounting bracket	1
⑤	Cable clamp (for the indoor unit's connection cable)	1

Safety precautions

Before use, please read these Safety Precautions thoroughly before installation.

- All the cautionary items mentioned below are important safety related items to be taken into consideration, so be sure to observe them at all times.



Incorrect installation could lead to serious consequences such as death, major injury or environmental destruction.

- Symbols used in these precautions



Always go along these instruction.

- After completed installation, carry out trial operation to confirm no anomaly, and ask the user to keep this installation manual in a good place for future reference.



Warnings



● Installation must be carried out by a qualified installer.

If you install it by yourself, it may cause an electric shock, fire and personal injury, as a result of a system malfunction.

● Install it in full accordance with the instruction manual.

Incorrect installation may cause an electric shock, fire and personal injury.

● Electrical work must be carried out by a qualified electrician in accordance with the technical standard for electrical equipment, the indoor wiring standard and this instruction manual.

Incorrect installation may cause an electric shock, fire and personal injury.

● Use the specific cables for wiring. And connect all the cables to terminals or connectors securely and clamp them with cable clamps in order for external forces not to be transmitted to the terminals directly.

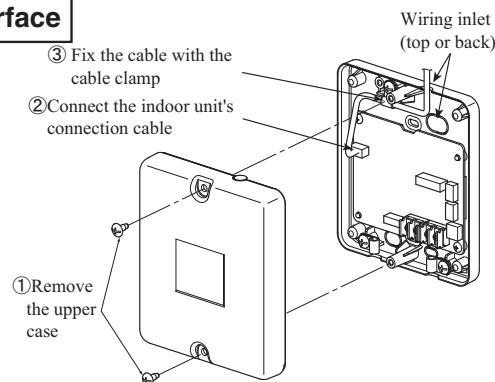
Incomplete connection may cause malfunction, and lead to heat generation and fire.

● Use the original accessories and specified components for installation.

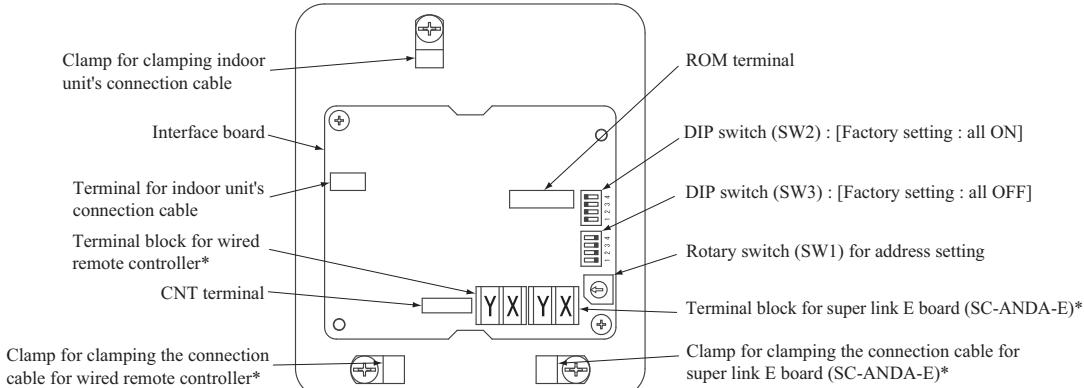
If the parts other than those prescribed by us are used, it may cause an electric shock, fire and personal injury.

Connecting the indoor unit's connection cable to the interface

- Remove the upper case of the interface.
 - Remove 2 screws from the interface casing before removal of upper casing.
- Connect the indoor unit's connection cable to the interface.
 - Connect the connector of the indoor unit connection cable to the connector on the interface's circuit board.
- Fix the indoor unit's connection cable with the cable clamp.
 - Cable can be brought in from the top or from the back.
 - Cut out the punch-outs for the connection cables running into the casing with cutter.
- Connect the indoor unit's connection cable to the indoor control PCB.
 - Connect the indoor unit's connection cable to the indoor control PCB securely.
 - Clamp the connection cable to the indoor control box securely with the cable clamp provided as an accessory.
 - Regarding the cable connection to the indoor unit, refer to the instruction manual for indoor unit.



Name of each part of the interface



*Either the connection cables of super link E board (SC-ANDA-E) or of wired remote controller is connectable.

Switch	Setting	Function	Switch	Setting	Function
SW2-1	ON**	CNT level input	SW2-3	ON**	External input (CNT input)
	OFF	CNT Pulse input		OFF	Operation permission/prohibition (CNT input)
SW2-2	ON**	Wired remote controller : Valid	SW2-4	ON**	Heat pump
	OFF	Wired remote controller : Invalid		OFF	Cooling only

** Factory setting

Installation of the interface

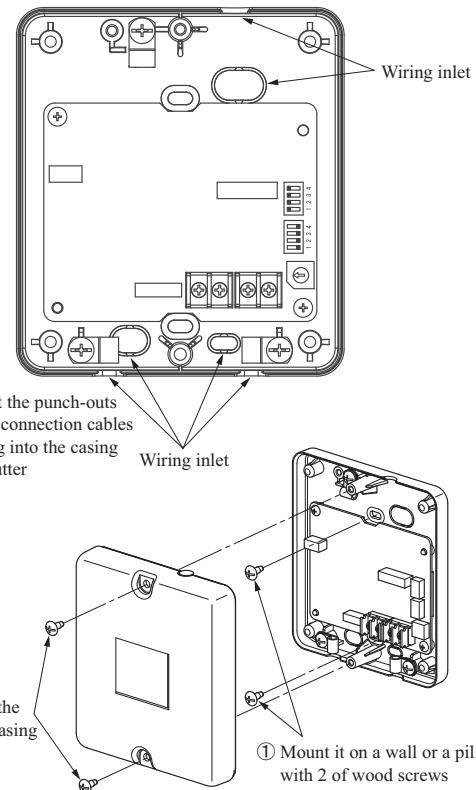
- Install the interface within the range of the connection cable length (approximately 1.3m) from the indoor unit.
- Be sure not to extend the connection cable on site. If the connection cable is extended, malfunction may occur.
- Fix the interface on the wall, pillar or the like.

● DO NOT install the interface and wired remote controller at the following places.

- Places exposed to direct sunlight
- Places near heating devices
- High humidity places
- Surfaces where are enough hot or cold to generate condensation
- Places exposed to oil mist or steam directly
- Uneven surface

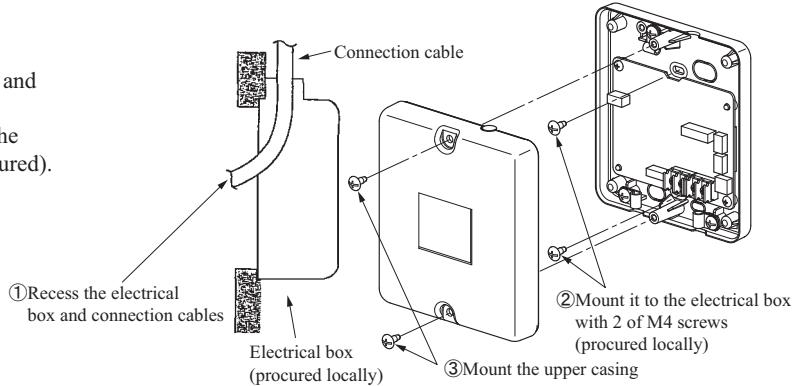
Mounting the interface directly on a wall

- Mount the lower casing of the interface on a flat surface with wood screws provided as standard accessory.
- Mount the upper casing.



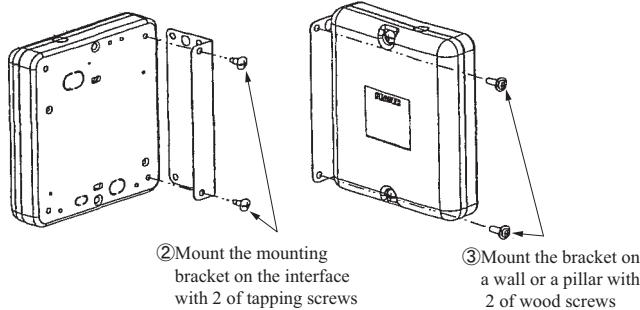
Recessing the interface in the wall

- Recess the electrical box (locally procured) and connection cables in the wall.
- Mount the lower casing of the interface to the electrical box with M4 screws (locally procured).
- Mount the upper casing.



Mounting the interface with the mounting bracket

- Mount the mounting bracket to the interface with tapping screws provided as standard accessory.
- Mount the mounting bracket on wall or the like with wood screws provided as standard accessory.
- Mount the mounting bracket to a wall surface, etc. using the wood screws provided.



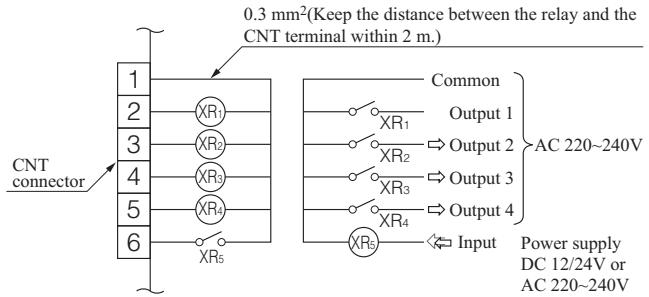
Installation check items

- Are the connection cables connected securely to the terminal blocks and connectors?
- Are the thickness and length of the connection cables conformed with the standard?

Functions of CNT connector

It is available to operate the air conditioning unit and to monitor the operation status with the external control unit (remote display) by sending the input/output signal through CNT connector on the indoor control PCB.

- ① Connect a external remote control unit (locally procured) to CNT terminal.
- ② In case of the pulse input, switch OFF the DIP switch SW2-1 on the interface PCB.
- ③ When setting operation permission/prohibition mode, switch OFF the DIP switch SW2-3 on the interface PCB.



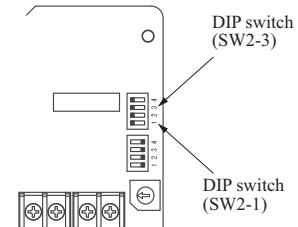
Input/ Output	Function	Output signal		Content	
		Relay	ON/OFF		
Output 1	Operation output	XR ₁	ON	During air-conditioner operation	
Output 2	Heating output	XR ₂	ON	During heating operation	
Output 3	Compressor operation output	XR ₃	ON	During compressor running	
Output 4	Malfunction output	XR ₄	ON	During anomalous stop	

- XR₁₋₄ are for the DC 12V relay
- XR₅ is a DC 12/24V or AC 220~240V relay
- CNT connector (local) maker, model

Connector	Molex	5264-06
Terminals	Molex	5263T

Input/ Output	Function	SW2-1		SW2-3			Air- Conditioner	Operation by Remote Controller		
		Setting	Setting	Input signal		Content				
				Level	Pulse					
Input	External control input	ON*	Level input	ON*	External input	OFF→ON	ON	Allowed		
				OFF		ON→OFF	OFF			
				OFF	Operation permission	OFF→ON	OFF	Not allowed		
				ON		ON→OFF	OFF			
		OFF	Pulse input	ON*	External input	OFF→ON	OFF→ON	Allowed		
				OFF		ON→OFF	ON→OFF			
				OFF	Operation permission	OFF→ON	ON	Not allowed		
				ON		ON→OFF	OFF			

* Factory setting



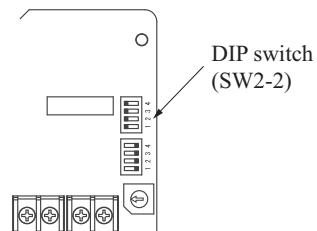
Connection of super link E board

Regarding the connection of super link E board, refer to the instruction manual of super link E board.

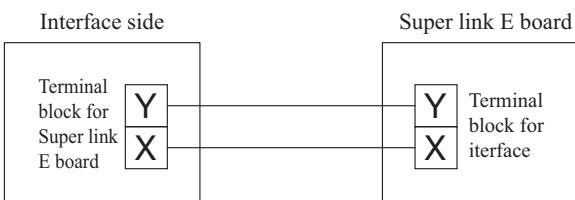
For electrical work, power supply for all of units in the super link system must be turned OFF.

- ① Switch ON the DIP switch SW2-2 (Factory setting: ON) on the interface PCB.

Caution: Wireless remote controller attached to the indoor unit can be used in parallel, after connecting the wired remote controller. However, some of functions other than the basic functions such as RUN/STOP, Temperature Setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.



- ② Wiring connection between the interface and the super link E board.



No.	Names of recommended signal wires
1	Shielded wire
2	Vinyl cabtyre round cord
3	Vinyl cabtyre round cable
4	Vinyl insulated wirevinyl sheathed cable for control

Within 200 m 0.5 mm² × 2 cores
 Within 300 m 0.75 mm² × 2 cores
 Within 400 m 1.25 mm² × 2 cores
 Within 600 m 2.0 mm² × 2 cores

- ③ Clamp the connection cables with cable clamps.

Connection of wired remote controller

Regarding the connection of wired remote controller, refer to the instruction manual of wired remote controller.

① Switch ON the DIP switch SW2-2 (Factory setting : ON) on the interface PCB.

Caution: Wireless remote controller attached to the indoor unit can be used in parallel, after connecting the wired remote controller. However, some of functions other than the basic functions such as RUN/STOP, Temperature Setting, etc. may not work properly and may have a mismatch between the display and the actual behavior.

② Wiring connection between the interface and the wired remote controller.

Installation and wiring of wired remote controller

Ⓐ Install the wired remote controller with reference to the attached instruction manual of wired remote controller.

Ⓑ 0.3mm² x 2-core cable should be used for the wiring of wired remote controller.

Ⓒ Maximum length of wiring is 600m.

If the length of wiring exceeds 100m, change the size of cable as mentioned below.

100m-200m: 0.5mm² x 2-core, 300m or less: 0.75mm² x 2-core, 400m or less: 1.25mm² x 2-core, 600m or less: 2.0mm² x 2-core

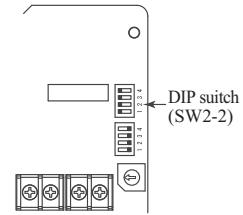
However, cable size connecting to the terminal of wired remote controller should not exceed 0.5mm². Accordingly if the size of connection cable exceeds 0.5mm², be sure to downsize it to 0.5mm² at the nearest section of the wired remote controller and waterproof treatment should be done at the connecting section in order to avoid contact failure.

Ⓓ Don't use the multi-core cable to avoid malfunction.

Ⓔ Keep the wiring of wired remote controller away from grounding (Don't touch it to any metal frame of building, etc.).

Ⓕ Connect the connection cables to the terminal blocks of the wired remote controller and the interface securely (no polarity).

③ Clamp the connection cables with cable clamps.



Control of multiple units by a single wired remote controller

Multiple units (up to 16) can be controlled by a single wired remote controller. In this case, all units connected with a single wired remote controller will operate under the same mode and same setting temperature.

① Connect all the interface with 2-core cables of wired remote controller line.

② Set the address of indoor unit for remote controller communication from "0" to "F" with the rotary switch SW1 on the interface PCB.

③ After turning the power ON, the address of indoor unit can be displayed by pressing [AIR CON] button on the wired remote controller.

Make sure all indoor units connected are displayed in order by pressing [▲] or [▼] button.

Caution : Remote controller sensor is invalid.

Master/Slave setting wired when 2 of wired remote controller are used

Maximum two wired remote controller can be connected to one indoor unit (or one group of indoor units)

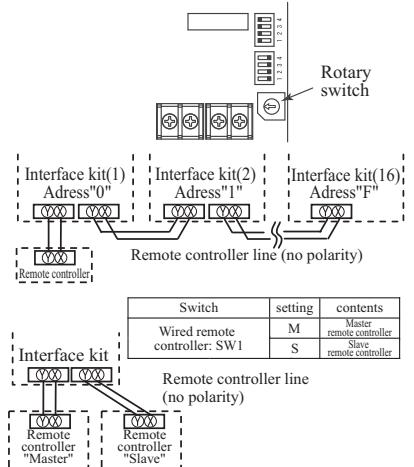
① Set the DIP switch SW1 on the wired remote controller to "Slave" for the slave remote controller. (Factory setting : Master)

Caution : Remote controller sensor is invalid.

② When using the wireless remote controller in parallel with the wired remote controller;

Temperature setting range should be changed with the wired remote controller (The set temperature may not be displayed correctly on the wireless remote controller, unless change of temperature setting range is done.)

Changing procedure of temperature setting range is as follows.

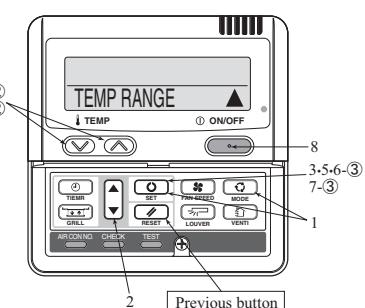


How to set upper and lower limit of temperature setting range

- Stop the air-conditioner, and press [SET] and [MODE] button at the same time for 3 seconds or more.
The indication changes to "FUNCTION SET ▼"
- Press [▼] button once, and change to the "TEMP RANGE ▲" indication.
- Press [SET] button, and enter the temperature range setting mode.
- Confirm that the "Upper limit ▼" is shown on the display.
- Press [SET] button to fix.
- ① Indication: "▲ V A SET UP" → "UPPER 28°C V A"
② Select the upper limit value 30°C with temperature setting button [▲]. "UPPER30°C V A" (blinking)
③ Press [SET] button to fix. "UPPER 30°C" (Displayed for two seconds)
After the fixed upper limit value displayed for two seconds, the indication will return to "UPPER LIMIT ▼".
- Press [▼] button once, "LOWER LIMIT ▲" is selected, press [SET] button to fix.
① Indication: "▲ V A SET UP" → "LOWER 20°C V A"
② Select the lower limit value 18°C with temperature setting button [▼]. "LOWER18°C V A" (blinking)
③ Press [SET] button to fix. "LOWER 18°C" (Displayed for two seconds)
After the fixed lower limit value displayed for two seconds, the indication will return to "LOWER LIMIT ▼".
- Press [ON/OFF] button to finish.

Temperature setting range

Mode	Temperature setting range	Upper limit	Lower limit
Heating	16-30°C		
Other than heating (Cooling, Fan, Dry, Auto)	18-30°C	20-30°C	16-26°C



- It is possible to quit in the middle by pressing [ON/OFF] button, but the change of setting is incomplete.
- During setting, if pressing [RESET] button, it returns to the previous screen.

12.5 Super link E board (SC-ADNA-E)

PJZ012D029F

- Read and understand the instructions completely before starting installation.
- Refer to the instructions for both indoor and outdoor units.

Safety precautions

- Carefully read "Safety precautions" first. Follow the instructions for installation.
- Precautions are grouped into "Warning" and "Caution". The "Warning" group includes items that may lead to serious injury or death if not observed. The items included in the "Caution" group also may lead to serious results under certain conditions. Both groups are crucial for safety installation. Read and understand them carefully.
- After installation, conduct the test operation of the device to check for any abnormalities. Describe how to operate the device to the customer following the installation instruction manual. Instruct the customer to keep this installation instruction for future reference.

Warning

- This device should be installed by the dealer where you purchase the device or a licensed professional shop. If the device is incorrectly installed by the customer, it may result in electric shock or fire.
- Install the device carefully following the installation instruction. If the device is incorrectly installed, it may result in electric shock or fire.
- Use the accessory parts and specified parts for installation. If any parts that do not match the specifications are used, it may result in electric shock or fire.
- A person with the electrical service certification should conduct the service based on the "Technical standards for electrical facilities", "Electrical Wiring Code", and the installation instruction. If the work is done incorrectly, it may result in electric shock or fire.
- Wiring should be securely connected using the specified types of wire. No external force on the wire should be applied to any terminals. If a secure connection is not achieved, it may result in electric shock or fire.

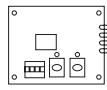
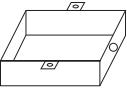
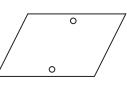
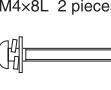
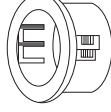
Caution

- Provide ground connection. The ground line should never be connected to the gas supply piping, the water supply piping, the lightning conductor rod, nor the telephone ground. If the grounding is improper, it may result in electric shock.
- Do not install the device in the following locations.
 - 1. Where there is mist/spray of oil or steam such as kitchens.
 - 2. Where there is corrosive gases such as sulfurous acid gas.
 - 3. Where there is a device generating electromagnetic waves. These may interfere with the control system resulting in the device becoming uncontrollable.
- 4. Where flammable volatile materials such as paint thinner and gasoline may exist or where they are handled. This may cause a fire.

1 Application

Indoor-to-outdoor three core communication specification type 3 (since October 2007)

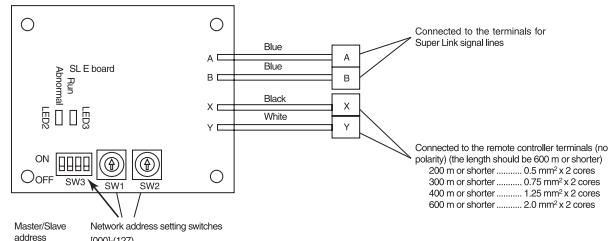
2 Accessories

SL E board	Metal box	Metal cover	Screw for Ground
			
Pan head screws	Locking supports	Binding band	Grommet
ø4x8L 2 pieces	To secure the print board and the metal box. Made of nylon 4 pieces		

5 Connection Outline

Note for setting the address

- Set the address between 00 and 47 for the previous Super Link connection and between 000 and 127 for the new Super Link connection. (*1)
- Do not set the address overlapping with those of the other devices in the network. (The default is 000)



(*1) Whether the actual link is either the new Super Link or the previous Super Link depends on the models of the connected outdoor and indoor units. Consult the agent or the dealer.

3 Function

Allowing the center console SL1N-E, SL2NA-E, and SL3N-AE/BE to control and monitor the commercial air conditioning unit.

4 Control switching

Settings can be changed by the switch SW3 on the SL E board as in the following.

Switch	Symbol	Switch	Remarks
SW3	1	ON	Master
		OFF (default)	Slave
	2	ON	Fixed previous protocol
		OFF (default)	Automatic adjustment of Super Link protocol
	3	ON	Indicates the forced operation stop when abnormality has occurred.
		OFF (default)	Indicates the status of running/stop as it is, when abnormality has occurred.
	4	ON	The hundredth address activated "1"
		OFF (default)	The hundredth address activated "0"

Signal line specification

Communication method	Previous Super Link	New Super Link
Line type	MVVS	MVVS
Line diameter	0.75 - 1.25mm ²	0.75/1.25mm ²
Signal line (total length)	up to 1000m	up to 1500/1000m (*2)
Signal line (maximum length)	up to 1000m	up to 1000m

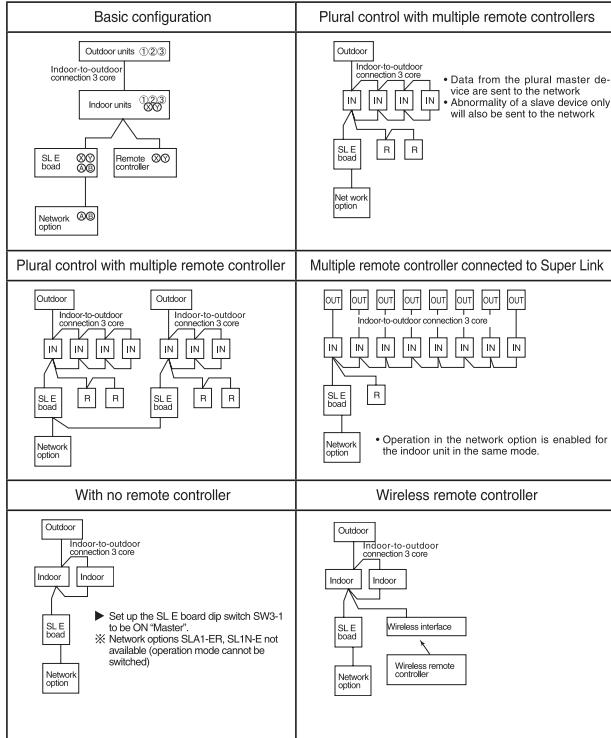
(*2) Up to 1500 m for 0.75 mm², and up to 1000 m for 1.25 mm².

Do not use 2.0 mm². It may cause an error.

(*3) Connect grounding on both ends of the shielding wire.

For the grounding method, refer to the section "6 Installation".

- (1) Set the Super Link network address with SW1 (tens place), SW2 (ones place), and SW3 (hundreds place).
- (2) Set the SL E board SW3-1 to be ON (Master) when using this without any remote controller (no wired remote controller nor wireless remote controller).
- (3) Set up the plural master/slave device using the dip switches on the indoor unit board.
- (4) Set up the remote controller master/slave device using the slide switch on the remote controller board.
- (5) Set up "0" to "F" using the address rotary switch on the indoor unit board when controlling the indoor unit with the multiple remote controller.

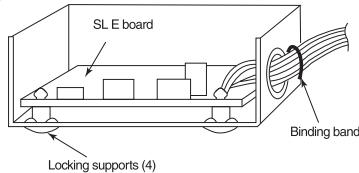


6 Installation

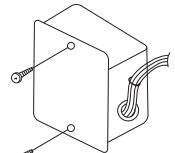
1. When using the metal box (mounted on the indoor unit / mounted on the back of the remote controller):

- (1) Mount the SL E board in the metal box using the locking supports.
- (2) Wiring should go through the provided grommet since then through the wiring to the hole on the Metal box.

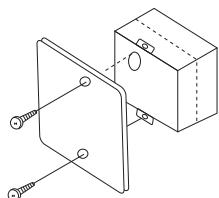
Secure the grommet after inserting the grommet into the Metal box as shown in below figure, then tie the wiring at the outlet of the unit using a binding band.



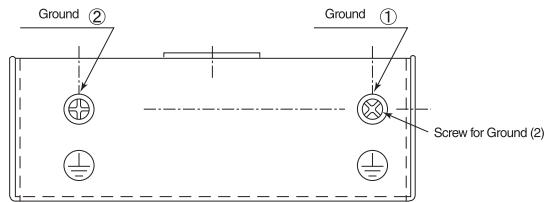
▲ When installed outside the indoor unit, put the metal cover on.



▲ When installed on the back of the remote controller, mount it directly on the remote controller bottom case.

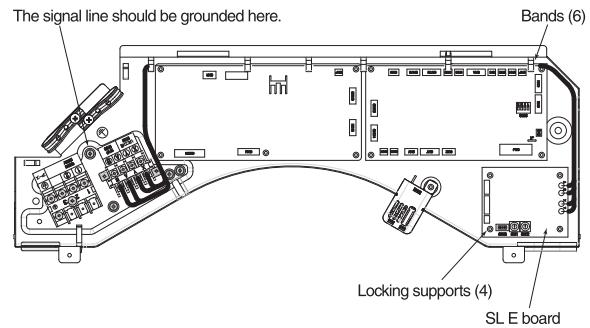


Connect grounding. Connect grounding for the power line to Ground ①, and grounding for the signal line to Ground ② or to the Ground on the indoor unit control box.



2. When connecting to the indoor unit control box (ceiling-concealed type and FDT type only):

- (1) Mount the SL E board in the control box using the locking supports.
- (2) Remove 6 bands from the box and put the wiring through the bands to be secured.



Electrical shock hazard! Make sure to turn the power off for servicing. Be cautious so that no abnormal force should be applied to the wiring. Do not let the SL E board hung by the wiring. Do not damage the board with a screw driver.

The board is sensitive to static electricity. Release the static electricity of your body before servicing.

(you can do this by touching the control board which is grounded).

Location of installation

Install the device at the location where there are no electromagnetic waves nor where there is water and dust. The specified temperature range of the device is 0 to 40°C. Install the device at the location where the ambient temperature stays within the range. If it exceeds the specification, make sure to provide solution such as installing a cooling fan. When used outside of the range, it may cause abnormal operation.

7 Indicator display

Check the LED 3 (green) and LED 2 (red) on the SL E board for flashing.

SL E board LEDs		Inspection mode	Display on the integrated network control device
Red	Green		
Off	Flashing	Normal communication	
Off	Off	<ul style="list-style-type: none"> • Disconnection in the remote controller communication line (X or Y) • Short-circuit in the remote controller communication line (between X and Y) • Faulty indoor unit remote controller power • Faulty remote controller communication circuit • Faulty CPU on SL E board 	No corresponding unit number
One flash	Flashing	<ul style="list-style-type: none"> • Disconnection in the Super Link signal line (A or B) • Short-circuit in the Super Link signal line (between A and B) • Faulty Super Link signal circuit 	
Two flashes	Flashing	<ul style="list-style-type: none"> • Faulty address setting for the SL E board (Set up the address for previous SL E board : more than 48 new SL E board : more than 128) 	
Three flashes	Flashing	<ul style="list-style-type: none"> • SL E board parent not set up when used without a remote controller • Faulty remote controller communication circuit 	E1
Four flashes	Flashing	<ul style="list-style-type: none"> • Address overlapping for the SL E board and the Super Link network connected indoor unit 	E2
Off	Flashing	<ul style="list-style-type: none"> • Number of connected devices exceeds the specification for the multiple indoor unit control 	E10

INVERTER RESIDENTIAL AIR CONDITIONERS



MITSUBISHI HEAVY INDUSTRIES, LTD.

Air-Conditioning & Refrigeration Systems Headquarters
16-5, 2-chome, Kounan, Minato-ku, Tokyo, 108-8215, Japan
Fax : (03) 6716-5926

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